I/WE CLAIM:

1. A high temperature resistive coating composition comprising:

a pigmenting component including a spinel;

a binder component including a silicone resin; and

a hardening agent.

2. The high temperature resistive coating composition of claim 1, wherein said spinel of said pigmenting component is of the formula AB_2O_4, in which

A is selected from the group consisting of Mg, Fe, Zn, (Mn), Cu, Ni and combinations thereof, and

B is selected from the group consisting of Al, Fe, Cr and combinations thereof.

3. The high temperature resistive coating composition of claim 2, wherein said spinel has a formula of $CuCr_2O_4$.

4. The high temperature resistive coating composition of claim 1, wherein said pigmenting component is a solution of said spinel in an aqueous acid.

5. The high temperature resistive coating composition of claim 4, wherein said pigmenting component has a pH less than 1.0..

6. The high temperature resistive coating composition of claim 4, wherein said acid is selected from the group consisting of chromic acid, phosphoric acid, and a combination thereof.

7. The high temperature resistive coating composition of claim 6, wherein said pigmenting component has a pH less than 1.0.

8. The high temperature resistive coating composition of claim 4, wherein said pigmenting component contains 25-75% spinel and 25-75% acid.

9. The high temperature resistive coating composition of claim 4, wherein said pigmenting component further includes a water-soluble crosslinking agent for crosslinking the silicone resin.

10. The high temperature resistive coating composition of claim 9, wherein said crosslinking agent forms 2-10% of said pigmenting component.

11. The high temperature resistive coating composition of claim 1, further comprising a metal oxide.

12. The high temperature resistive coating composition of claim 1, further comprising at least one modifying agent selected from the group consisting of surfactants, dispersants and emulsifiers.

13. The high temperature resistive coating composition of claim 1, wherein the silicone resin of said binder component is a polysiloxane.

14. The high temperature resistive coating composition of claim 1, wherein the silicone resin has a methyl to phenyl ratio of between 30:70 and 70:30.

15. The high temperature resistive coating composition of claim 1, wherein said binder component further includes an organic solvent.

16. The high temperature resistive coating composition of claim 15, wherein said organic solvent and said silicone resin are present in a substantially 1:1 ratio.

17. The high temperature resistive coating composition of claim 1, wherein said hardening agent is constituted by a finely powdered material selected from the group consisting of diamond powder, BN, WC, SiC, Al_2O_3, AlN and SiO_2.

18. The high temperature resistive coating composition of claim 17, wherein said hardening agent is a finely powdered material having a formula of SiC.

19. The high temperature resistive coating composition of claim 1, wherein said composition is a liquid at room temperature.

20. The high temperature resistive coating composition of claim 19, wherein said pigmenting component, said binder component and said hardening agent are provided in a ratio of one liter to one liter to 100-200 grams, respectively.

21. A cooking appliance:

an oven cavity having an interior surface;

a heating element for heating said oven cavity;

a rack arranged in the oven cavity; and

a high temperature resistive coating composition arranged on at least one of the interior surface of said oven cavity and said rack, said high temperature resistive coating composition being formed from:

a pigmenting component including a spinel;

a binder component including a silicone resin; and

a hardening agent.

22. The cooking appliance of claim 21, wherein said spinel of said pigmenting component is of the formula AB_2O_4, in which

A is selected from the group consisting of Mg, Fe, Zn, Mn, Cu, Ni, and combinations thereof, and;

B is selected from the group consisting of Al, Fe, Cr and combinations thereof.

23. The cooking appliance of claim 22, wherein said spinel has a formula of $CuCr_2O_4$.

24. The cooking appliance of claim 21, wherein the coating composition includes a metal oxide.

25. The cooking appliance of claim 21, wherein the coating composition further comprises at least one modifying agent selected from the group consisting of surfactants, dispersants and emulsifiers.

26. The cooking appliance of claim 21, wherein the silicone resin of said binder component is a polysiloxane.

27. The cooking appliance of claim 21, wherein the silicone resin has a methyl to phenyl ratio of between 30:70 and 70:30.

28. The cooking appliance of claim 21, wherein said hardening agent is constituted by a finely powdered material selected from the group consisting of diamond powder, BN, WC, SiC, Al_2O_3, AlN and SiO_2.

29. The cooking appliance of claim 28, wherein said hardening agent is a finely powdered material having a formula of SiC.

~~30.~~ A method of coating a substrate with a high temperature resistive coating composition comprising:

sand blasting the substrate with a blasting media;

spraying the substrate with a high temperature resistive coating composition formed from a pigmenting component including a spinel, a binder component including a silicone resin, and a hardening agent;

removing excess moisture from the coating in a flash-off oven;

curing the coating composition at an elevated temperature; and

cooling the substrate.

31. The method of claim 30, wherein the sand blasting is conducted with 100 grit aluminum oxide as the blasting media.

32. The method of claim 30, wherein the sand blasting is conducted at between approximately 80-90 psi.

33. The method of claim 30, further comprising blowing off excess blast media after sand blasting the substrate.

34. The method of claim 30, wherein the spraying is performed through electrostatic spraying.

35. The method of claim 34, wherein the electrostatic spraying directs the coating composition through a rotating disk reciprocator.

36. The method of claim 34, further comprising electrostatically spraying the coating composition to a thickness between approximately 0.8 - 2.5 mm.

37. The method of claim 34, wherein said coating composition is applied to the substrate in a single pass.

38. The method of claim 30, wherein excess moisture is removed from the coating composition in a flash-off oven through heating the substrate in an oven having a temperature of between approximately 105° - 125°F (40° - 50°C).

39. The method of claim 38, further comprising: heating the substrate in the flash-off oven in the order of 15-25 minutes.

40. The method of claim 30, wherein said curing includes heating the substrate in an oven having a temperature of between approximately 650° to 750°F (340° - 400°C).

41. The method of claim 40, further comprising: heating the substrate in the oven for 1 to 1.5 hours.

42. The method of claim 30, wherein said high temperature resistive coating composition is formed by combining:

a spinel having a formula of $CuCr_2O_4$ and a crosslinking agent for a silicone resin in an aqueous acid;

a silicone resin, having a methyl to phenyl ratio of between 30:70 and 70:30 in an organic solvent; and

a finely powdered hardening agent having a formula of SiC.